

ANESTHESIA OPERATING ROOM SETUP

brought to you by the

NATIONAL CAPITAL CONSORTIUM
DEPARTMENT OF ANESTHESIOLOGY
2008-2009 CHIEF RESIDENTS

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ADDITIONAL DISCLAIMER

The following represents a way, certainly not the only way or even the best way for an anesthesia provider to prepare an operating room or other remote area for providing anesthetic care for a basic adult patient. Always check with your supervising staff for individual preferences.

MSMAIDS—A MNEMONIC

- M = Machine
- S = Suction
- M = Monitors
- A = Airway
- I = IV
- D = Drugs
- S = Special/Stuff

MACHINE

- Low Pressure Test
 - Open common gas outlet and close gas flows
 - Attach suction bulb, squeeze, and ensure bulb stays flat for 10 sec



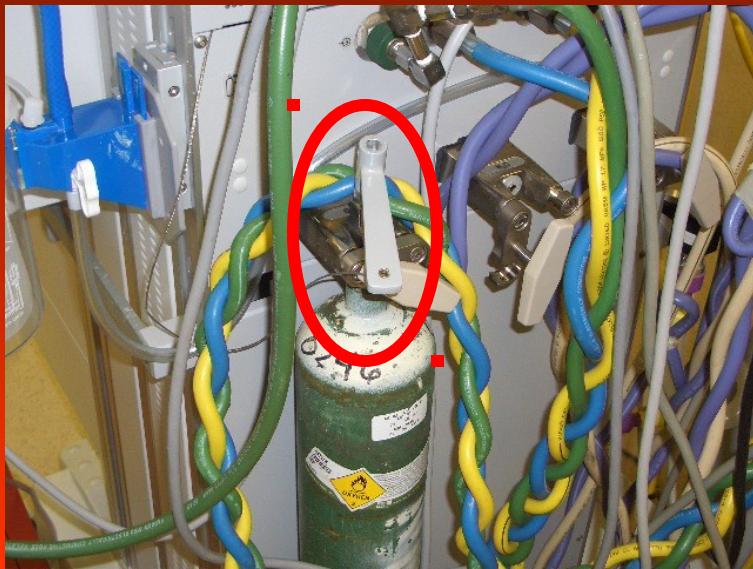
MACHINE

- Turn everything on
 - Anesthesia machine
 - Vital signs monitor
 - Airway gas monitor

Note that the pictures shown here are from a Datex-Ohmeda Aestiva/5, but the principles generally apply to all anesthesia machines. Some newer machines have automated checks that only require you to follow the on-screen instructions.

MACHINE

- Check the reserve O₂ cylinder supply via turning the cylinder key counterclockwise as viewed from above and insuring at least 1000 psi available on the gauge



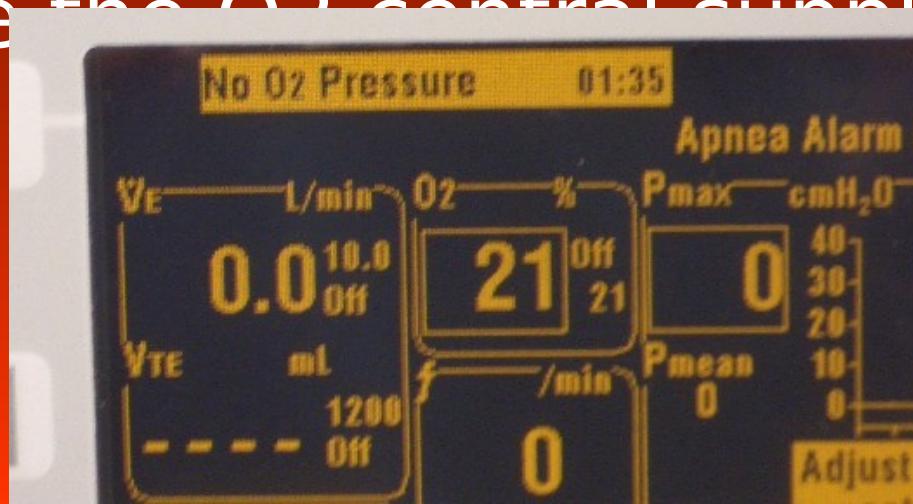
MACHINE

- Turn off the reserve O₂ cylinder by turning the key clockwise.
- Unscrew the O₂ central supply from the wall outlet after ensuring 50 psi on gauge



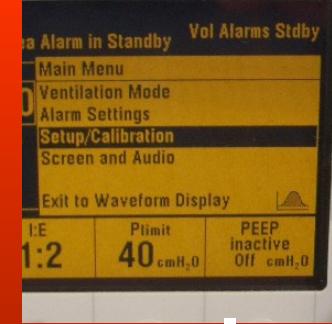
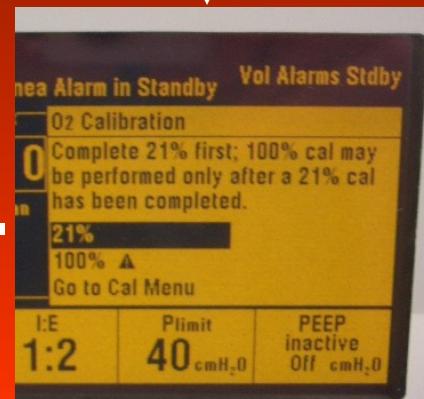
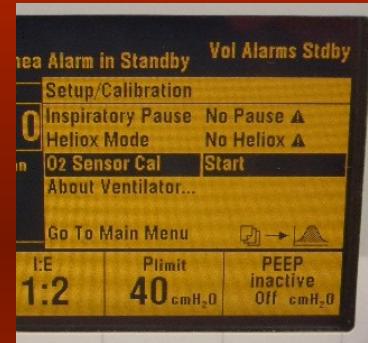
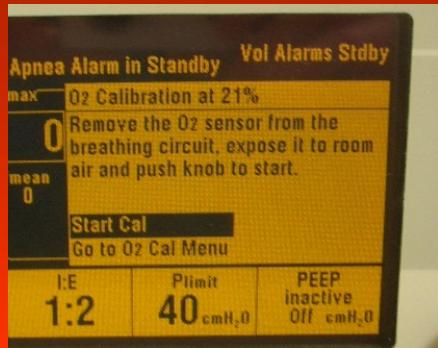
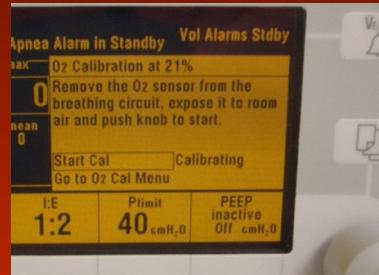
MACHINE

- Test the low O₂ pressure alarm by pressing the O₂ flush button until the pressure reading on the O₂ cylinder goes to zero and wait for the distinctive alarm.
- Replace the O₂ control supply line.



MACHINE

- Calibrate the O2 sensor
 - Open the sensor to air
 - Choose calibrate to 21%
 - Replace sensor when complete



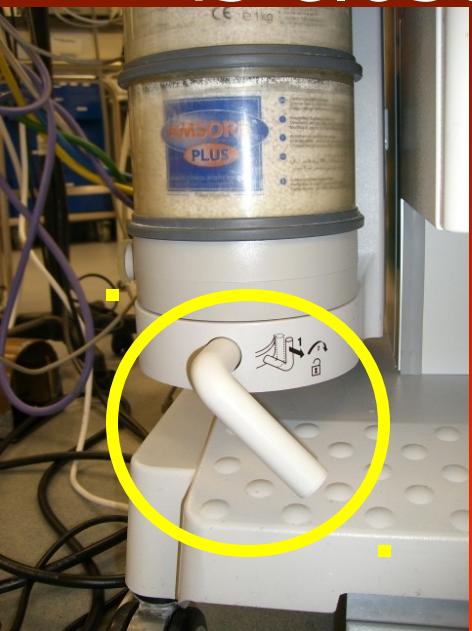
MACHINE—CO₂ SENSOR

- Test the CO₂ sensor
 - Unscrew the CO₂ line from the Y-piece
 - Blow into the CO₂ line
 - Look for the CO₂ waveform on the



MACHINE

- Ensure CO₂ canister holder is locked closed
- Ensure common gas out is closed



HIGH PRESSURE TEST

- Close the APL valve to 30
- Occlude the Y-piece
- O₂ flow high (> 10 L/min) until the pressure increases to 20-30 psi on the gauge
- Pressure shouldn't fall much for 10-15 seconds
- Return the APL valve to MIN



MACHINE—VENTILATOR

Test the ventilator

- Attach the bag to the Y-piece
- Flip the lever from bag to ventilator mode
- You can fill the bellows by:
 - Turning up the gas flows
 - Pressing the O2 flush button (dangerous with patient attached due to risk of barotrauma)
- Remove bag to test ventilator disconnect alarm



MACHINE

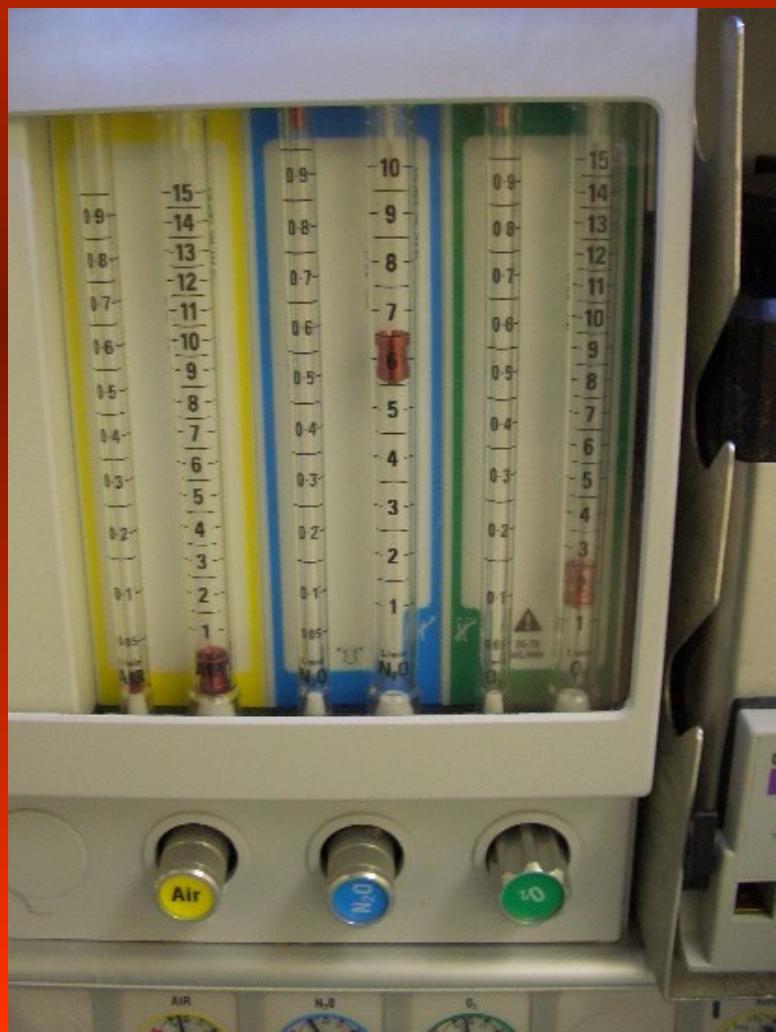
- Replace bag
- For your own sanity and to stop the beeping, stop the apnea alarm after the ventilator test by ending the case

(on the model below, the left-hand middle button, confirmed by



MACHINE

- Test all flowmeters
- Ensure that as N_2O is increased, O_2 also increases
- Ensure that as O_2 is decreased, N_2O decreases





MACHINE



- Test vaporizers by rotating each dial counterclockwise and then closing it one at a time. You should not be able to open two vaporizers at the same time.
- Check anesthetic levels in vaporizers (sight gauge)

(Note that dials cannot be rotated unless vaporizer is properly seated in machine.)



MACHINE

- The previous slides are IAW guidelines for anesthesia machine checks issued in 1993 by the FDA
- Resource for anesthesia machine checks and other info:

Virtual Anaesthetic Machine by UF
(<http://vam.anest.ufl.edu/fdacheckout.html>)

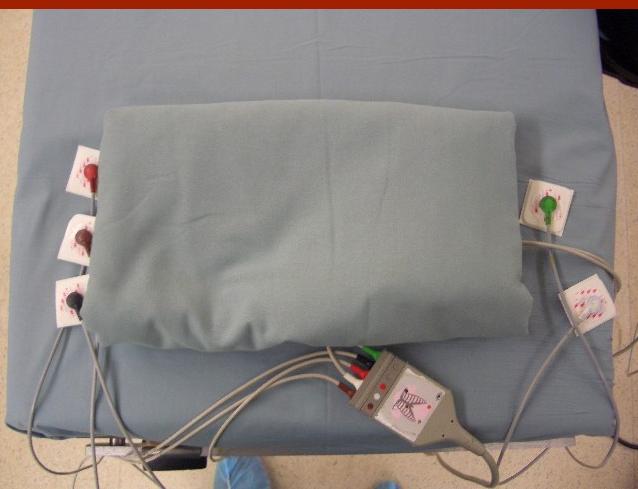
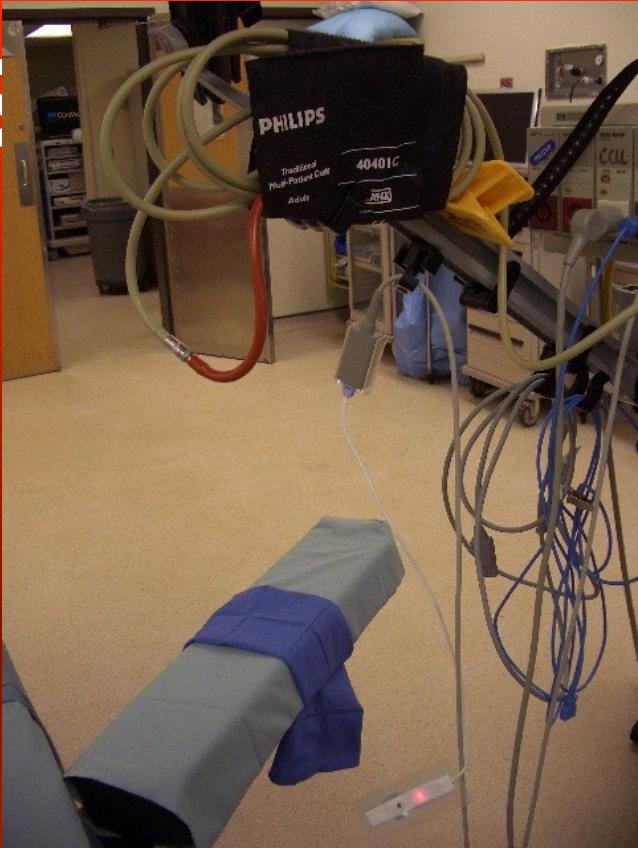
SUCTION

- Suction on MAX
- Canister in place with tubing connected and key turned upright
- Tubing with Yankauer tip (often tucked into common gas outlet)



MONITORS

- Ensure monitor set to “adult”
- Pulse Oximeter
- NIBP Cuff (appropriate size)
- ECG Leads
- Temp Probe + Cable
- Optional
 - Arterial Line
 - CVP
 - BIS



AIRWAY

- Laryngoscope handles with Mac 3¹ and Miller 2² blades (check lights on each)
- Endotracheal Tubes³
 - Stylet inserted and not protruding beyond tip
 - Cuff checked and syringe attached
 - 8.0 + 7.0 for males and 7.0 + 6.0 for females
- Oral Airway⁴ with Tongue Blade
- Lube⁵: Nasal Airway⁶, OGT, Temp Probe⁷
- Soft Bite Block⁸ (4 gauze 4x4's rolled up)

AIRWAY



AIRWAY—EMERGENCY

- Ensure the following airway management items are available in the room:
 - LMAs (sizes 3, 4, 5)
 - Lightwand
 - Gum Elastic Bougie
 - Cricothyroidotomy kit

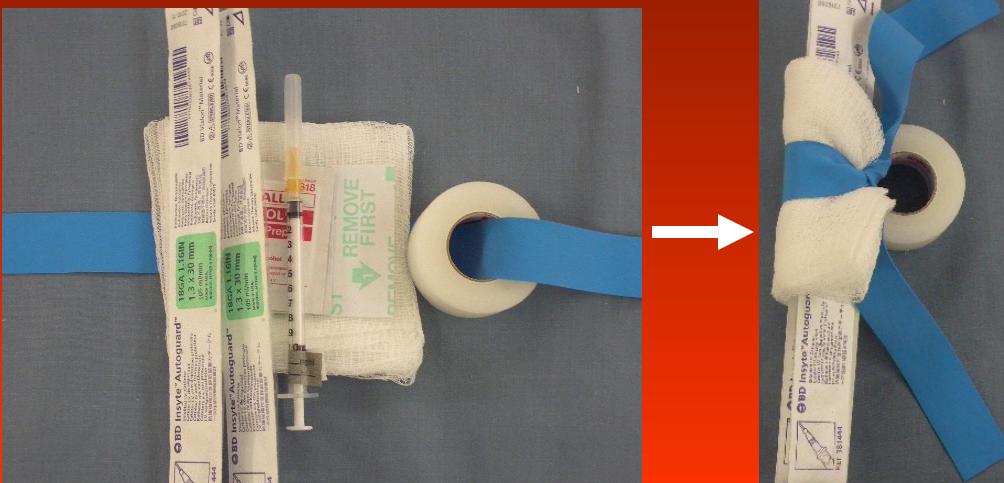
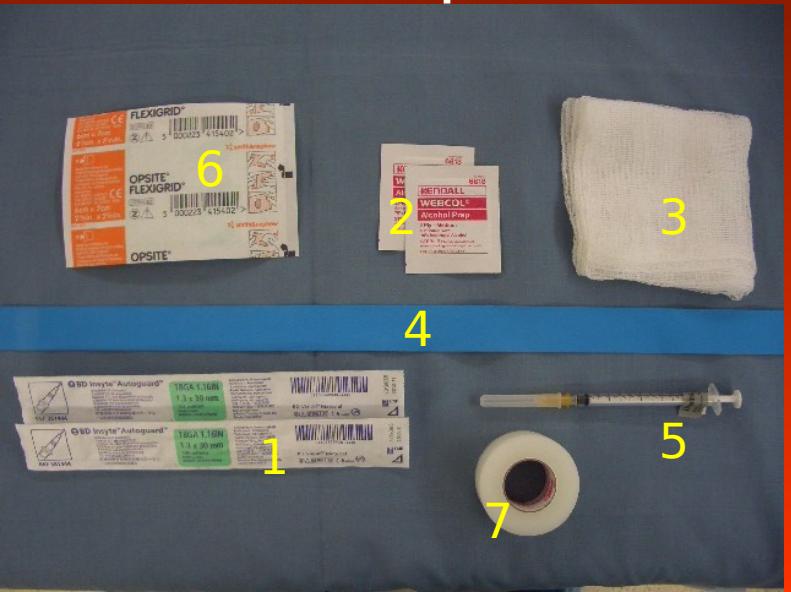
IV FLUID

- Bag of LR
- IV tubing with stopcocks
- Ensure connections on tubing are tightened
- Prime tubing
- Optional
 - Blood tubing
 - Fluid warmer



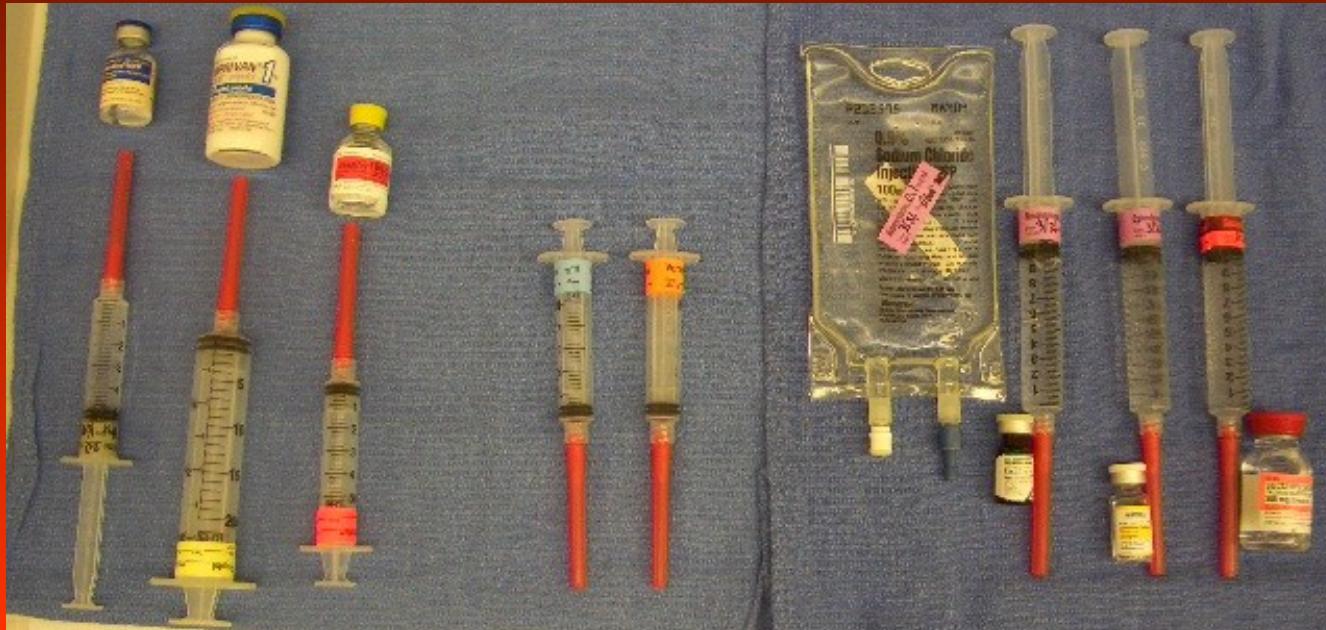
IV START KIT

- IV catheters¹
(preferably 18g)
- Skin cleaner²
- Gauze³
- Tourniquet⁴
- Lidocaine (≤ 1 mL
of 1% with skin
needle)⁵
- Clear occlusive
dressing⁶
- Tape⁷



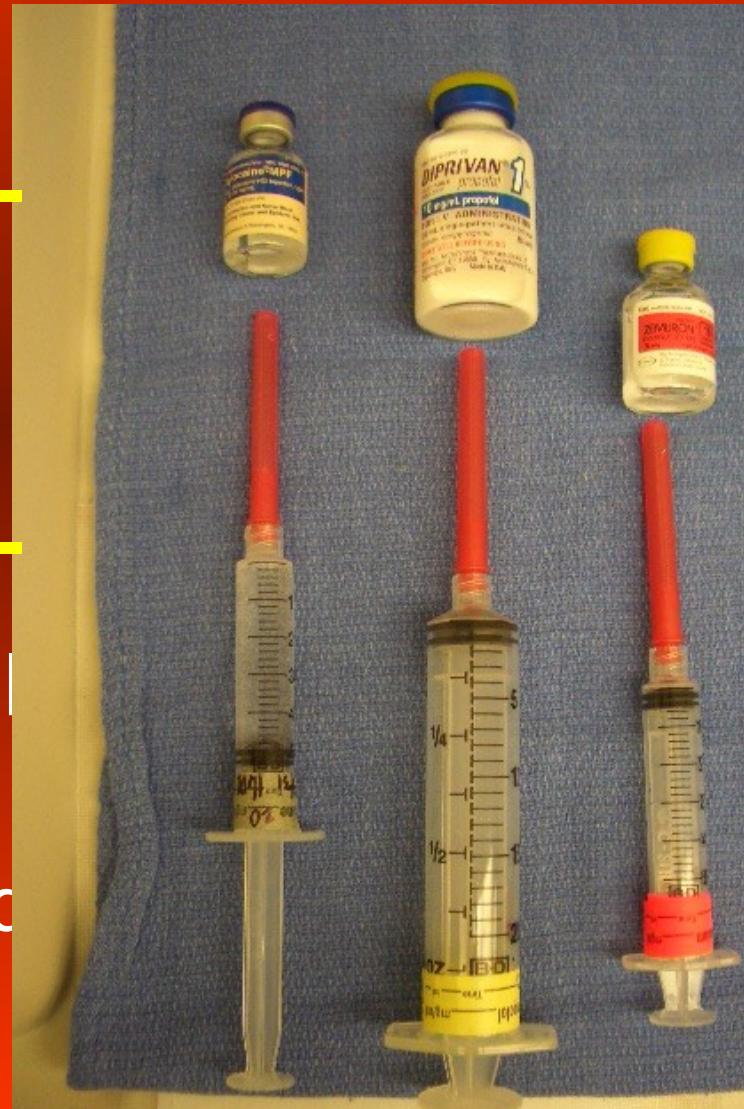
DRUGS—GENERAL

- Label and date all syringes
- Put time on Propofol syringe (only good for 6 hours once drawn)
- Save vials until case(s) concluded



DRUGS—INDUCTION

- Lidocaine 2%, 5 mL
- Propofol, 20 mL OR
- Etomidate, 10 mL
- Rocuronium, 5 mL OR
- Vecuronium, 10 mL
(Mix with 10 mL of fluid)



DRUGS—CONTROLLED

- Do not draw for more than one case at a time
- Obtain from Omnicell/Py
- Versed, 5 mg (5 mL) OR 2 mg (2 mL)
- Fentanyl, 250 mcg (5 ml OR 500 mcg (10 mL)



DRUGS—EMERGENCY

- Phenylephrine, 10 mL of 0.1 mg/mL
 - 1 mL of 10 mg/mL in 100 mL of NS
- Ephedrine, 10 mL of 5 mg/mL
 - 1 mL of 50 mg/mL + 9 mL fluid
- Succinylcholine, 10 mL
- Available in cart:
 - Epinephrine, Atropine, Bicarb, Calcium, etc



STUFF

- Ambu Bag
- O₂ for transport
 - Jackson Rees or face mask
- Stool for you to sit on
- Optional
 - Eye tape pre-torn
 - Tube tape pre-torn
 - Mask strap



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